

Claims:

1. A method for controlling an operative setting of a communications link, the communications link being
5 capable of acquiring a plurality of operative settings, said method comprising:
a) comparing audio quality in the communications link under different operative settings;
b) selecting an operative setting at least in part on the
10 basis of the comparing in a);
c) sending a control signal to at least one component in the communications link to cause the communications link to attempt to acquire the selected setting.
- 15 2. A method as defined in claim 1, wherein audio quality is a measure of actual audio quality of the communications link under different operative settings.
- 20 3. A method as defined in claim 1, wherein audio quality is as estimate of audio quality of the communications link under different operative settings.
- 25 4. A method as defined in claim 1, wherein the communications link comprises a plurality of components, said method comprising sending a control signal to the plurality of components in the communications link to cause the communications link to acquire the selected setting.
- 30 5. A method as defined in claim 1, wherein said method further comprises:

- a) deriving measurements of a certain characteristic of an audio signal for respective operative settings, the certain characteristic characterizing at least in part audio quality;
- 5 b) comparing the measurements derived in a) to select an operative setting.
6. A method as defined in claim 5, wherein the certain characteristic is selected from the set consisting of a measure of echo, measure of delay, the signal level, a measure of the information loss and noise.
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7. A method as defined in claim 5, wherein said method comprising:
- 11 a) deriving measurements for a set of characteristics of an audio signal for respective operative settings, each characteristic in the set of characteristics characterizing at least in part audio quality under a given operative setting;
- 12 b) comparing the measurements derived in a) to select an operative setting.
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8. A method as defined in claim 7, wherein the set characteristic includes at least one characteristic selected from the set consisting of a measure of echo, measure of delay, the signal level, a measure of the information loss and noise.
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9. A method as defined in claim 1, wherein the communications link is capable of acquiring two operative settings namely a bypass setting and an active setting,
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when in the bypass setting the communications link transmitting an audio signal substantially unaltered, when in the active setting the communications link transmitting an audio signal subsequent to at least one processing operation on the audio signal.

10. A method as defined in claim 9, said method comprising:
- a) providing a data element indicative of a measure of effectiveness associated with the at least one processing operation on the audio signal;
 - b) selecting a setting at least in part on the basis of the measure of effectiveness of the at least one processing operation.
11. A method as defined in claim 10, wherein said measure of effectiveness is used to assess a degree of improvement in audio quality over an audio quality associated with the bypass setting.
12. A method as defined in claim 11, said method comprising selecting the active setting when the measure of effectiveness is above a certain threshold of effectiveness.
13. An apparatus for controlling an operative setting of a communications link, the communications link being capable of acquiring a plurality of operative settings, said apparatus comprising:
- a) an input for receiving data elements indicative of audio quality in the communications link under different operative settings;

- b) a processing unit coupled to said input, said processing unit being operative for:
- i) comparing the data elements received at the input;
 - ii) selecting an operative setting at least in part on the basis of the comparing in i);
 - iii) generating a control data element suitable for causing the communications link to attempt to acquire the selected setting;
- c) an output for releasing a control signal indicative of the control data element to at least one component in the communications link for causing the communications link to attempt to acquire the selected setting.
14. An apparatus as defined in claim 13, wherein the data elements indicative of audio quality are measures of actual audio quality of the communications link under the different operative settings.
15. An apparatus as defined in claim 13, wherein the data elements indicative of audio quality are estimates of audio quality of the communications link under the different operative settings.
16. An apparatus as defined in claim 13, wherein the data elements indicative of audio quality are measurements of a certain characteristic of an audio signal for respective operative settings, the certain characteristic characterizing at least in part audio quality, said processing unit being further operative for comparing the measurements to select an operative setting.

17. An apparatus as defined in claim 13, wherein the communications links comprises a plurality of components, said output being suitable for releasing a control signal to the plurality of components in the communications link to cause the communications link to acquire the selected setting.
18. An apparatus as defined in claim 16, wherein the certain characteristic is selected from the set consisting of a measure of echo, measure of delay, the signal level, a measure of the information loss and noise.
19. An apparatus as defined in claim 16, wherein the data elements indicative of audio quality are measurements for a set of characteristics of an audio signal for respective operative settings, each characteristic in the set of characteristics characterizing at least in part audio quality when the communication link is in a given operative setting, said processing unit being further operative for comparing the measurements to select an operative setting.
20. An apparatus as defined in claim 19, wherein the set characteristics include at least one characteristic selected from the set consisting of a measure of echo, measure of delay, the signal level, a measure of the information loss and noise.
21. An apparatus as defined in claim 13, wherein the communications link is capable of acquiring two operative

settings namely a bypass setting and an active setting, when in the bypass setting the communications links transmitting an audio signal substantially unaltered, when in the active setting the communications links
5 transmitting an audio signal subsequent to at least one processing operation on the audio signal.

22. An apparatus as defined in claim 21, said processing unit being operative for:

- 10 a) providing a data element indicative of a measure of effectiveness associated with the at least one processing operation on the audio signal;
b) selecting a setting at least in part on the basis of the measure of effectiveness of the at least one
15 processing operation.

23. An apparatus as defined in claim 22, wherein said measure of effectiveness is used to assess a degree a degree of improvement in audio quality over an audio
20 quality associated with the bypass setting.

24. An apparatus as defined in claim 23, said processing unit being operative for selecting the active setting when the measure of effectiveness is above a certain
25 threshold of effectiveness.

25. An apparatus for controlling an operative setting of a communications link, the communications link being capable of acquiring two operative settings namely a
30 bypass setting and an active setting, when in the bypass setting the communications link transmitting an audio

signal substantially unaltered, when in the active setting the communications link transmitting an audio signal subsequent to at least one processing operation on the audio signal, said apparatus comprising:

- 5 a) an input for receiving data elements indicative of an effectiveness of the at least one processing operation on the audio signal;
- b) a processing unit coupled to said input, said processing unit being operative for:
 - 10 i) selecting an operative setting at least in part on the basis of the data elements received at the input;
 - ii) generating a control data element suitable for causing the communications link to attempt to
 - 15 acquire the selected setting;
- c) an output for releasing a control signal indicative of the control data element to at least one component in the communications link for causing the communications link to attempt to acquire the selected setting.

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26. An apparatus as defined in claim 25, wherein the at least one processing operation is selected from the set consisting of echo cancellation, noise reduction, noise conditioning, information loss management and signal

25 level adjustment.

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27. A computer readable medium comprising a program element suitable for execution by a computing apparatus for controlling an operative setting of a communications link, the communications link being capable of acquiring

a plurality of operative settings, said computing apparatus comprising:

a) a memory unit for storing the program element;

5 b) a processor operatively coupled to said memory unit, said program element when executing on said processor being operative for implementing:

i) an input for receiving data elements indicative of audio quality in the communications link under different operative settings;

10 ii) a processing unit for:

(1) comparing the data elements received at the input;

(2) selecting an operative setting at least in part on the basis of the comparing in (1);

15 (3) generating a control data element suitable for causing the communications link to attempt to acquire the selected setting;

20 iii) an output for releasing a control signal indicative of the control data element to at least one component in the communications link for causing the communications link to attempt to acquire the selected setting.

25 28. A computer readable medium as defined in claim 27, wherein the data elements indicative of audio quality are measures of actual audio quality of the communications link under the different operative settings.

30 29. A computer readable medium as defined in claim 27, wherein the data elements indicative of audio quality are

estimates of audio quality of the communications link under the different operative settings.

30. A computer readable medium as defined in claim 27,
5 wherein the data elements indicative of audio quality are measurements of a certain characteristic of an audio signal for respective operative settings, the certain characteristic characterizing at least in part audio quality, said processing unit being further operative for
10 comparing the measurements to select an operative setting.

31. A computer readable medium as defined in claim 27,
15 wherein the communications links comprises a plurality of components, said output being suitable for releasing a control signal to the plurality of components in the communications link to cause the communications link to acquire the selected setting.

- 20 32. A computer readable medium as defined in claim 31, wherein the certain characteristic is selected from the set consisting of a measure of echo, measure of delay, the signal level, a measure of the information loss and noise.

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33. A computer readable medium as defined in claim 30,
wherein the data elements indicative of audio quality are measurements for a set of characteristics of an audio signal for respective operative settings, each
30 characteristic in the set of characteristics characterizing at least in part audio quality when the

communication link is in a given operative setting, said processing unit is further operative for comparing the measurements to select an operative setting.

5 34. A computer readable medium as defined in claim 33, wherein the set characteristics include at least one characteristic selected from the set consisting of a measure of echo, measure of delay, the signal level, a measure of the information loss and noise.

10 35. A computer readable medium as defined in claim 27, wherein the communications link is capable of acquiring two operative settings namely a bypass setting and an active setting, when in the bypass setting the
15 communications link transmitting an audio signal substantially unaltered, when in the active setting the communications link transmitting an audio signal subsequent to at least one processing operation on the audio signal.

20 36. A computer readable medium as defined in claim 35, said processing unit being operative for:

a) providing a data element indicative of a measure of effectiveness associated with the at least one
25 processing operation on the audio signal;
b) selecting a setting at least in part on the basis of the measure of effectiveness of the at least one processing operation.

30 37. A computer readable medium as defined in claim 36, wherein said measure of effectiveness is used to assess a

degree of improvement in audio quality over an audio quality associated with the bypass setting.

38. A computer readable medium as defined in claim 37, said
5 processing unit being operative for selecting the active setting when the measure of effectiveness is above a certain threshold of effectiveness.
39. An apparatus for selectively enabling tandem-free
10 operation of a communications link, the communications link comprising at least one functional stage operative to implement at least one processing operation on an audio signal, during tandem-free operation said at least
15 one functional stage being disabled, said apparatus comprising:
a) an input for receiving data elements indicative of an effectiveness of the at least one processing operation on the audio signal;
b) a processing unit coupled to said input, said
20 processing unit being operative for processing the data element to generate a control data element suitable for causing the communications link to selectively enable tandem-free operation of the communications link;
c) an output for releasing a control signal indicative of
25 the control data element to the at least one functional stage in the communications link for selectively enabling tandem-free operation.
40. An apparatus for controlling an operative setting of a
30 communications link, the communications link being

capable of acquiring a plurality of operative settings,
said apparatus comprising:

- 5 a) means for receiving data elements indicative of audio
quality in the communications link under different
operative settings;
- b) processing means operative for:
 - i) comparing the data elements received;
 - 10 ii) selecting an operative setting at least in part on
the basis of the comparing in i);
 - iii) generating a control data element suitable for
causing the communications link to attempt to
acquire the selected setting;
- 15 c) means for releasing a control signal indicative of the
control data element to at least one component in the
communications link for causing the communications link
to attempt to acquire the selected setting.